

Remarks/Arguments

Applicants have received and carefully reviewed the Office Action of the Examiner mailed December 3, 2010. Currently, claims 29, 31-34, 36-37, 39-45, 47-56, and 58-70 remain pending. Favorable consideration of the following remarks is respectfully requested.

Information Disclosure Statement

The Examiner indicated the IDS filed June 10, 2010 fails to comply with 37 CFR 1.98(a)(3) because it does not contain a concise explanation of the relevance of the Japanese reference JP 666787, which contains no English. Applicants submit herewith a copy of an English abstract for the reference. Applicants respectfully request the Examiner consider the English abstract and initial the enclosed IDS listing.

The Examiner also stated that the IDS fails to comply with 37 CFR 1.98(a)(2) for failing to provide a copy of the two non-patent literature documents. A check of private PAIR shows that both documents were submitted and are available in pdf form from PAIR. Applicants respectfully request the Examiner consider the references and initial the enclosed IDS listing.

Declaration under 37 CFR § 1.131

On page 3 of the Office Action, the Examiner states that the Declaration submitted April 14, 2010 was reviewed and not found to be convincing because it is not commensurate in scope with the claims. The Examiner suggested a Declaration be filed that states the fuel cell referred to in the declaration was made in accordance with the instantly claimed invention. A new Declaration with the suggested language is filed herewith. Applicants submit that the documentary evidence (declarations and exhibits) of record shows that a fuel cell was completed in accordance with the claimed invention and was tested and found suitable for its intended purpose, prior to April 30, 2003. Reconsideration and acceptance of the declarations is respectfully requested.

Claim Rejections – 35 USC § 103

Claims 29, 31-34, 36, 37, 39-45, 47, 48, 54-56, and 58-70 were rejected under 35 U.S.C. 103(a) as being unpatentable over Leban (U.S. Patent No. 7,049,024) in view of Blunk et al.

(U.S. Patent No. 6,942,941).

Applicants respectfully disagree that claims 29, 31-34, 36, 37, 39-45, 47, 48, 54-56, and 58-70 are obvious in view of Leban and Blunk et al. For example, nothing in Leban or Blunk et al. appears to disclose many of the elements of claim 47 including, for example, “a first conductive layer provided on at least a portion of the first electrode top surface, at least a portion of the first electrode bottom surface, and one or more of at least a portion of the first electrode aperture surface, wherein the first conductive layer on the one or more of the at least a portion of the first electrode aperture surface provides an electrical connection between the first conductive layer on the first electrode top surface and the first conductive layer on the first electrode bottom surface”.

The Examiner appears to rely on the bipolar plates of Blunk et al. as disclosing “a first conductive layer provided on at least a portion of the first electrode top surface, at least a portion of the first electrode bottom surface, and one or more of at least a portion of the first electrode aperture surface, wherein the first conductive layer on the one or more of the at least a portion of the first electrode aperture surface provides an electrical connection between the first conductive layer on the first electrode top surface and the first conductive layer on the first electrode bottom surface”. Applicants respectfully disagree.

In the Office Action, the Examiner interprets the bipolar plate of Blunk et al. to be the same as the electrodes. Applicants respectfully disagree. Blunk et al. discloses “two individual proton exchange membrane (PEM) fuel cells connected to form a stack having a pair of membrane-electrode-assemblies (MEAs) 4, 6 separated from each other by an electrically conductive, liquid cooled, bipolar separator plate conductive element 8”. (Column 3, line 67 through column 4, line 5). Blunk et al. continues “a preferred bipolar separator plate 8 typically has two electrically active sides 20, 21 within the stack, each active side 20, 21 respectively facing a separate MEA 4, 6 with opposite charges that are separated, hence so-called ‘bipolar’ plate”. (Column 4, lines 7-12). As such, the MEAs 4 and 6 would appear to correspond to the electrodes of Leban and the bipolar separator plate would appear to correspond to the proton exchange membrane separating the electrodes. Thus, it is not understood how the bipolar separator plate is considered the claimed electrodes, as suggested by the Examiner, when Blunk et al. clearly teaches the bipolar separator plate separating the electrode assemblies.

Further, as noted above, the opposite charges of the bipolar separator plate are separated,

which is clearly shown in Figures 4-6 of Blunk et al. Hence, nothing in Blunk et al. appears to disclose a first conductive layer provided on at least a portion of one or more of at least a portion of the first electrode aperture surface that provides an electrical connection between the first conductive layer on the first electrode top surface and the first conductive layer on the first electrode bottom surface.

Further, even if the bipolar plates of Blunk et al. could be considered as teaching the claimed first electrode and second electrode (which Applicants believe they do not), Applicants respectfully assert that there is no reason to modify the teaching of Leban to include the bipolar plates of Blunk et al. As understood from the Supreme Court's decision under KSR, there must be some reason to make the claimed combination. MPEP § 2141 states:

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), stated that “[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR*, 550 U.S. at ___, 82 USPQ2d at 1396.

(Emphasis added). The Office Action states “it would be desirable to use conductively coated polymer plates, such as those of Blunk et al., instead of entirely conductive plates, such as those of Leban, since such a substitution may result in a lighter fuel cell in the instance that the coated plates of Blunk et al. are lighter than the plates of Leban, or in a less expensive fuel cell in the instance that the materials of the plates of Blunk et al. are less expensive than those of Leban”. Clearly this assertion does not provide the required articulated reasoning with rational underpinning to support the legal conclusion of obviousness, as required by *KSR*. There is no evidence that the proposed substitution would result in a lighter fuel cell or a less expensive fuel cell as argued by the Examiner. For these and other reasons, claim 47, as well as all claims dependent therefrom, are believed to be clearly patentable over Leban and Blunk et al.

Despite the foregoing, and to advance prosecution in a timely manner, Applicants submit herewith a new Declaration under 37 C.F.R. § 1.131, showing completion of the invention prior to the April 30, 2003 filing date of Leban. It is believed that the 1.131 Declarations remove the Leban patent as a reference. Additionally, Blunk et al. was filed on August 6, 2003, which is after the filing date of Leban. As such, it is believed that the

1.131 Declarations also remove the Blunk et al. patent as a reference. For these and other reasons, all pending claims 29, 31-34, 36, 37, 39-45, 47, 48, 54-56, and 58-70 are believed to be clearly patentable over Leban in view of Blunk et al.

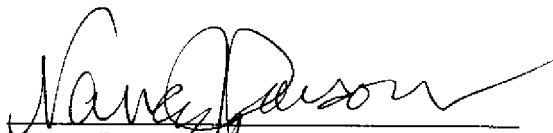
Claims 49-53 were rejected under 35 U.S.C. 103(a) as being unpatentable over Leban in view of Blunk et al., and further in view of Badding et al. (U.S. Publication No. 2002/0102450). Applicants respectfully disagree. As discussed previously, claim 47 is believed to be clearly patentable over Leban and Blunk et al., and nothing in Badding et al. appears to remedy the noted shortcomings. Also, the 1.131 Declaration, showing completing of the instant invention prior to April 30, 2003, remove the Leban and Blunk et al. patents as references. Therefore, for at least these reasons, claims 49-53, which depend from claim 47 and include significant additional distinguishing features, are believed to be clearly patentable over Leban in view of Blunk et al. and further in view of Badding et al.

Conclusion

In view of the foregoing, all pending claims 29, 31-34, 36-37, 39-45, 47-56, and 58-70 are believed to be in a condition for allowance. Reconsideration and withdrawal of the rejection are respectfully requested. If a telephone conference might be of assistance, the Examiner is encouraged to contact the undersigned attorney at (612) 359-9348.

Respectfully Submitted,

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